No. 9600153

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

NDSU Research Foundation

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Munich'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of Washington, D.C. this twenty-eighth day of June in the year of our Lord one thousand [illegible] hundred and ninety-six.*

Attest:

Marsha A. Stanton
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

[illegible]
Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a).

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
NDSU Research Foundation

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER
D 8460

3. VARIETY NAME
'Munich'

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
c/o Executive Director
PO Box 5014
Fargo ND 58105-5014

5. TELEPHONE *(include area code)*
701-231-8931

6. FAX *(include area code)*
701-231-1013

FOR OFFICIAL USE ONLY

PVPO NUMBER
9600153

FILING DATE
MARCH 8, 1996

FEES RECEIVED
FILING AND EXAMINATION FEE
$ 2450.00
DATE
MARCH 8, 1996
CERTIFICATION FEE
$ 300.00
DATE
5-28-96

7. GENUS AND SPECIES NAME
Triticum turgidum L.

8. FAMILY NAME *(Botanical)*
Gramineae

9. CROP KIND NAME *(Common name)*
Durum wheat

10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.) (Common name)*
501 (c) (3) Corporation - NDSU Research Foundation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
North Dakota

12. DATE OF INCORPORATION

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

Elias M. Elias
Department of Plant Sciences
North Dakota State Univeristy
PO Box 5051
Fargo, ND 58105-5051

Dale Zetocha
Executive Director
NDSU Research Foundation
PO Box 5014
Fargo, ND 58105-5014

14. TELEPHONE *(include area code)*
701-231-8159

15. FAX *(include area code)*
701-231-8474

16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow instructions on reverse)*

a. ☒ Exhibit A. Origin and Breeding History of the Variety
b. ☒ Exhibit B. Statement of Distinctness
c. ☒ Exhibit C. Objective Description of the Variety
d. ☒ Exhibit D. Additional Description of the Variety
e. ☒ Exhibit E. Statement of the Basis of the Applicant's Ownership
f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository)*
g. ☒ Filing and Examination Fee ($2,450), made payable to "Treasurer of the United States" *(Mail to PVPO)*

17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)?*
☒ YES *(If "yes," answer items 18 and 19 below)* ☐ NO *(If "no," go to item 20)*

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☒ YES ☐ NO

19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☒ YES *(If "yes," give names of countries and dates)* ☐ NO USA - Release date March 3, 1995
USA - First seed sale November 15, 1995

21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *(Owner(s))*		SIGNATURE OF APPLICANT *(Owner(s))*	
Dale Zetocha			
NAME *(Please print or type)*		NAME *(Please print or type)*	
Dale Zetocha			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Executive Director NDSU Research Foundation	3/7/96		

SD-470 (04-96) *(Previous editions are to be destroyed)*

(See reverse for instructions and information collection burden statement)

EXHIBIT A - ORIGIN AND BREEDING HISTORY

'MUNICH'

Fall 1982	Original cross made at North Dakota State University (NDSU) greenhouse. Pedigree - D8030/D8016 D8030 - D73121/DT427 D8016 -D7075/Ward//Vic
Spring 1983	F_1 plants, NDSU greenhouse.
Summer 1983	F_2 plants, NDSU research land.
Winter 1983-84	F_3 head rows winter nursery - Weslaco, TX.
Summer 1984	F_4 head rows, NDSU research land.
Summer 1985	F_5 preliminary yield trail, two locations, NDSU research land. Experimental line designation - D8460.
Summer 1986	F_6 Advanced yield trial, two locations, NDSU research land.
Summer 1987	F_7 elite yield trial, three locations, NDSU research land.
Summer 1988	F_8 Uniform Regional Durum Nursery, 15 locations, North Dakota, South Dakota, Minnesota, Montana, and Canada.
Summer 1989	F_9 Uniform Regional Durum Nursery, 15 locations, North Dakota, South Dakota, Minnesota, Montana, and Canada.
Summer 1990	F_{10} Uniform Regional Durum Nursery, 15 locations, North Dakota, South Dakota, Minnesota, Montana, and Canada.
Summer 1991	Uniform Regional Durum Nursery, 15 locations, North Dakota, South Dakota, Minnesota, Montana, and Canada.
Summer 1992	Uniform Regional Durum Nursery, 15 locations, North Dakota, South Dakota, Minnesota, Montana, and Canada.
Winter 1992-93	Seed increase (60 lb) in Yuma, AZ by Seedstocks Project.

Summer 1993	Uniform Regional Durum Nursery, 15 locations, North Dakota, South Dakota, Minnesota, Montana, and Canada. Roguing taller plants from seed increase lots. Sent head rows and bulk seed to Yuma, AZ for seed increase.
Winter 1993-94	Seed increase of head rows and bulk in Yuma, AZ by Seedstocks Project.
Summer 1994	Uniform Regional Durum Nursery, 14 locations, North Dakota, South Dakota, Minnesota, Montana, and Canada. Seed increase in North Dakota by Seedstocks Project.
March 3, 1995	D8460 released as a named cultivar, Munich.

NDSU

DEPARTMENT OF PLANT SCIENCES
RESEARCH–TEACHING–EXTENSION

9600153

North Dakota State University
Loftsgard Hall
P.O. Box 5051
Fargo, North Dakota
58105-5051 USA

Tel.701.231.7971
Fax701.231.8474

April 9, 1996

Mr. Alan A. Atchley
Plant Variety Protection Office
NAL Building, Room 500
10301 Baltimore Blvd.
Beltsville, MD 20705

Biotechnology
Breeding
Forestry
Genetics
Horticulture
Physiology
Production
Weed Science

SUBJECT: PVP Application No. 9600153, WHEAT, 'Munich'

Dear Mr. Atchley:

The following is additional information that you requested in your letter dated April 2, 1996:

Exhibit A

The variety release committee of the North Dakota Agricultural Experiment Station (NDAES) recommended to Dr. Albert Schneiter, Interim Chair of Department of Plant Sciences, and Dr. Robert Todd, Director, NDAES, that the experimental durum wheat line D8460 be named as Munich and released as a cultivar. Dr. Schneiter announced this release through the public media on March 3, 1995. Seed of Munich was distributed by the NDAES through the North Dakota Crop Improvement county groups to experienced seed producers for seed multiplication during the growing season of 1995. These producers were under contract to the Seedstocks Project, Department of Plant Sciences, NDAES, North Dakota State University for the Munich seed produced. On November 15, 1995, these contracted seed producers were released from their contract and Munich seed was then available and offered for sale in The U.S.A.

The scientific name of durum wheat can be *Triticum turgidum* L. Var. *Durum*.

The following are the pedigrees you requested:

D73121 = D65150/Leeds//Ward
D7075 = Ward/Macoun
DT427 = D62220/D57114/Leeds

In early generations F_2 - F_5, high heritable traits such as plant height, maturity, and disease resistant were selected. Starting at F_5 generation, selection criteria also included grain yield, test

4

9600153

weight, kernel weight, and pasta quality traits (i.e., protein content, gluten strength, milling extraction, spaghetti color, cooking quality, etc.). Data were obtained from multiple locations and over years to evaluate and identify the experimental line D8460 that was named Munich. The objective of the selection and evaluation of the various trait was to identify a superior durum wheat genotype adapted to North Dakota durum wheat production area and having acceptable (compared to check cultivars) milling and pasta making quality traits for the national pasta industry and the export market. Munich was observed for ten generations from 1985 to 1994 and was shown to be stable and uniform.

Thank you for your time and consideration. Please let me know if have any questions.

Sincerely,

E. Elias

Elias M. Elias
Assistant Professor
Durum Wheat Breeder

EXHIBIT B - NOVELTY STATEMENT

To my knowledge, Munich most nearly resembles Renville durum wheat. DNA analysis using STS-PCR products (Talbert et al., 1994) can easily differentiate Munich from Renville. Using PCR products of primer set G8 (Talbert et al., 1994) separated on a 7% polyacrylamide gel, a 330 kb band can be found in Munich that is not present in Renville.

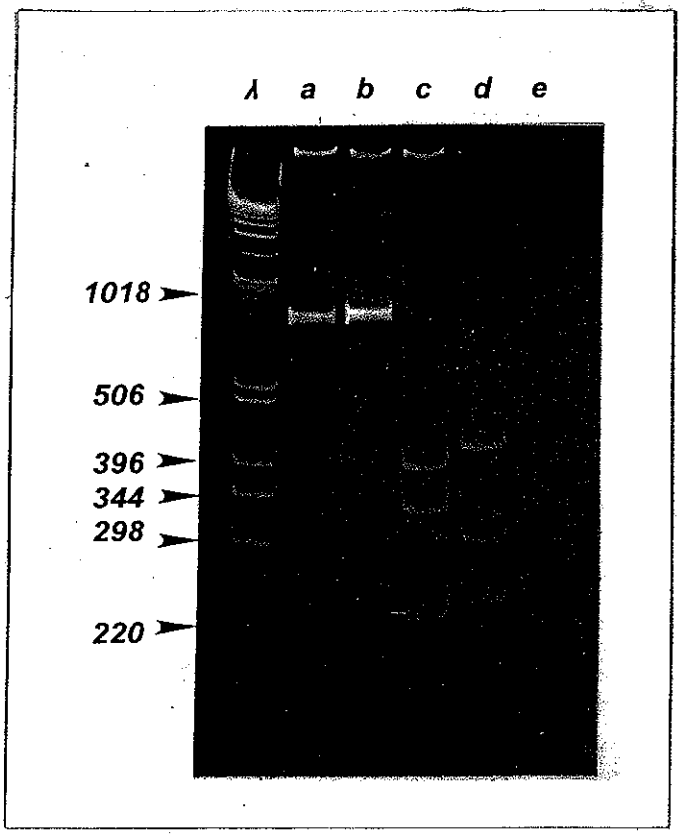

Figure 1. PCR product G8 separated on a 7% polyacrylamide gel shows the critical 330 kb band. Lanes a and b represent uncut samples of Munich and Renville, respectively. Lanes c and d represent *Hinf I* restriction digested samples of Munich and Renville, respectively. Lane λ is molecular weight marker and lane e is negative control without genomic DNA.

Materials and Methods

DNA was extracted from a bulk of 12 seedling leaf stage plants from each of Munich and Renville using the protocol described in Anderson et al., (1993). Primer set G8 which is mapped to the short arm of chromosome 6B and 6D of wheat was used for the analysis. The PCR amplification, restriction digest and polyacrylamide gel analysis was performed as described by Talbert et al., (1994) with the exception of an amplification profile of 30 cycles at 94 °C for 1 min., 50 °C for 1 min., and 72 °C for 1.2 min.

References

Anderson, J.A., M.E. Sorrells, and S.D. Tanksly. 1993. RFLP analysis of genomic regions associated with resistance to pre-harvest sprouting in wheat. Crop Sci. 33:453-459.

Talbert, L.E., N.K. Blake, P.W. Chee, T.K. Blake, and G.M. Magyar. 1994. Evaluation of "Sequence-Tagged-Site" PCR products as molecular markers in wheat. Theor. Appl. Genet. 78:495-504.

FORM APPROVED: OMB NO. 0581-0056

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
COMMODITIES SCIENTIFIC SUPPORT DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*TRITICUM SPP.*)

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
NDSU Research Foundation

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)
Box 5014
Fargo, ND 58105-50514

FOR OFFICIAL USE ONLY
PVPO NUMBER 9600153
VARIETY NAME OR TEMPORARY DESIGNATION

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. KIND:
[2] 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:
[1] 1 = SPRING 2 = WINTER 3 = OTHER (*Specify*) _____ [2] 1 = SOFT 2 = HARD 3 = OTHER (*Specify*) _____
[3] 1 = WHITE 2 = RED 3 = OTHER (*Specify*) Amber

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:
[0][5][9] FIRST FLOWERING [0][6][4] LAST FLOWERING

4. MATURITY (*50% Flowering*):
[0][1] NO. OF DAYS *EARLIER* THAN ..... [6] 1 = ARTHUR 2 = SCOUT 3 = CHRIS
[ ][ ] NO. OF DAYS *LATER* THAN ..... [ ] 4 = LEMHI 5 = NUGAINES 6 = LEEDS

5. PLANT HEIGHT (*From soil level to top of head*):
[0][8][3] CM. HIGH
[--][--] CM. TALLER THAN ..... [ ]
[1][1] CM. SHORTER THAN ..... [6] 1 = ARTHUR 2 = SCOUT 3 = CHRIS 4 = LEMHI 5 = NUGAINES 6 = LEEDS

6. PLANT COLOR AT BOOTING (*See reverse*):
[2] 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHER COLOR:
[1] 1 = YELLOW 2 = PURPLE

8. STEM:
[1] Anthocyanin: 1 = ABSENT 2 = PRESENT
[2] Waxy bloom: 1 = ABSENT 2 = PRESENT
[1] Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT
[1] Internodes: 1 = HOLLOW 2 = SOLID
[0][4] NO. OF NODES (*Originating from node above ground*)
[1][5] CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:
[1] Anthocyanin: 1 = ABSENT 2 = PRESENT
[1] Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:
[2] Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER (*Specify*): _____
[1] Flag leaf: 1 = NOT TWISTED 2 = TWISTED
[1] Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT
[2] Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT
[0][9] MM. LEAF WIDTH (*First leaf below flag leaf*)
[2][5] CM. LEAF LENGTH (*First leaf below flag leaf*):

9600153

11. HEAD:

[2] Density: 1 = LAX 2 = DENSE

[4] Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER (Specify) oblong

[4] Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

[1] Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BROWN 6 = BLACK 7 = OTHER (Specify): _____

[0][7] CM. LENGTH

[1][2] MM. WIDTH

12. GLUMES AT MATURITY:

[1] Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.)

[2] Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.) 3 = WIDE (CA. 4 mm.)

[5] Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE

[3] Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

[1] 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

[1] 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

[3] 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

[3] Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL

[1] Cheek: 1 = ROUNDED 2 = ANGULAR

[1] Brush: 1 = SHORT 2 = MEDIUM 3 = LONG

[1] Brush: 1 = NOT COLLARED 2 = COLLARED

[1] Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK

[2] Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____

[0][6] MM. LENGTH

[0][3] MM. WIDTH

[3][7] GM. PER 1000 SEEDS

17. SEED CREASE:

[2] Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

[2] Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[2] STEM RUST (Races) _____

[2] LEAF RUST (Races) _____

[0] STRIPE RUST (Races) _____

[0] LOOSE SMUT

[0] POWDERY MILDEW

[0] BUNT

[ ] OTHER (Specify) _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[0] SAWFLY

[0] APHID (Bydv.)

[0] GREEN BUG

[0] CEREAL LEAF BEETLE

[ ] OTHER (Specify) _____

HESSIAN FLY RACES: [0] GP [0] A [0] B [0] C [0] D [0] E [0] F [0] G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Renville	Seed size	Renville
Leaf size	"	Seed shape	"
Leaf color	"	Coleoptile elongation	"
Leaf carriage	"	Seedling pigmentation	"

RECEIVED 96 MAR -8 USDA-ARS-PWRO

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(a) L.W. Briggle and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.

(b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

8

EXHIBIT D - ADDITIONAL DESCRIPTION OF VARIETY

On the average Munich is 9.2 cm shorter than Renville (Table 1). The data for plant height is normally distributed for all three year. Data across years is not presented because years were not homogenous. Tables 2 and 3 provide additional agronomic and quality data for information purposes only.

Table 1. Plant height Mean of Munich and Reneville at Langdon, North Dakota (1992-1994).

Genotype	1992	1993	1994
	cm		
Munich	107.0	97.8	111.0
Renville	125.3	110.8	117.3
LSD (0.05)	4.5	4.8	4.9

Table 2. Mean of agronomic traits and diseases of Munich and selected cultivars grown at various locations in North Dakota, Canada, Montana, South Dakota, and Minnesota (1989 through 1994).

Genotype	Yield	Test Weight	Kernel Weight	Heading	Height	Leaf dis.	Lodging
	bu/A	lb/bu	mg	days	cm	(0-9)	(0-9)
MUNICH	50.0	59.5	37.1	63.3	83.2	4.7	1.0
RENVILLE	49.1	59.5	37.0	63.9	94.6	5.0	2.3
MONROE	44.9	59.2	41.8	60.9	90.4	5.1	1.6
VIC	46.2	60.0	41.1	62.9	95.3	4.9	1.9
MEDORA	45.5	59.6	38.8	62.9	94.4	5.9	2.0
RUGBY	47.7	60.2	38.7	63.0	95.0	4.6	2.1
LLOYD	43.5	55.6	38.2	65.0	71.3	5.9	0.7

Table 3. Summary of quality evaluations for Munich grown at 27 location/years in field plots (1989 through 1993).

Genotype	% Protein		Mixograph	Sedimentation	% Extraction		Kernel Size	
	Wheat	Semolina			Total	Semolina	% Large	% Small
				mm				
Munich	15.2	14.3	5.4	40.5	70.1	60.3	21	7
Renville	15.1	14.2	6.0	43.7	69.7	60.9	15	8
Monroe	15.1	14.2	6.9	41.2	69.7	60.1	36	4
Vic	15.2	14.3	6.0	41.4	69.8	59.8	32	4
Medora	15.6	14.7	6.1	42.7	69.6	59.9	29	5
Rugby	15.4	14.5	3.2	22.7	70.0	60.5	23	5
Lloyd	14.9	13.8	6.1	44.9	69.2	59.5	16	8

1989: Carrington, Casselton, Dickinson, Langdon, Prosper, Williston
(Sceptre grown at four locations only)
1990: Carrington, Casselton, Dickinson, Langdon, Prosper, Williston
1991: Carrington, Casselton, Hettinger, Langdon, Minot, Williston
1992: Carrington, Casselton, Dickinson, Hettinger, Langdon, Minot and Williston
1993: Hettinger and Williston

9600153

EXHIBIT E - STATEMENT OF THE BASIS OF THE APPLICANT'S OWNERSHIP

Dr. Elias M. Elias, an employee of the North Dakota Agricultural Experiment Station and North Dakota State University, is a plant breeder who developed 'Munich' the durum wheat cultivar for which Plant Variety Protection is hereby sought. The employee by agreement and because of the condition of the use of facilities and funds of the North Dakota Agricultural Experiment Station and North Dakota State University has assigned all ownership rights to 'Munich' durum wheat to the North Dakota Agricultural Experiment Station and North Dakota State University.

North Dakota State University on behalf of the North Dakota Agricultural Experiment Station has assigned all ownership to the NDSU Research Foundation. The NDSU Research Foundation is a nonprofit corporation set up to own and manage the intellectual property of North Dakota State University.

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